

CLAIMS

Claim 1 (currently amended): A crash box comprising:
an outer hollow member;
an internal member slideably mounted within the outer hollow member including compression reducing arms extending towards an internal surface of the outer hollow member; and
an expandable material provided on the extremities of the compression reducing arms between the extremities of the compression reducing arms and the inner internal surface of the outer hollow member;
wherein the expandable material comprises a structural adhesive foam that foams under the conditions that into which a vehicle frame is subjected to in an e-coat or paint oven.

Claims 2-4 (canceled)

Claim 5 (currently amended): A crash box according to claim 1 wherein spacers are provided to hold the internal member away from the internal surface of the outer hollow external member to allow the anticorrosion fluid to contact, substantially an entirety of the entire internal surface of the outer hollow external member.

Claim 6 (original): A crash box according to claim 5 in which the spacers are provided on the internal member.

Claim 7 (currently amended): A crash box according to claim 1 wherein the outer external hollow member is cylindrical, hexagonal, rectangular or square in cross section.

Claim 8 (currently amended): A crash box according to claim 1 wherein the outer external hollow member is made of metal.

Claim 9 (currently amended): A crash box according to claim 1 wherein the outer external hollow member is made of rigid plastic material such as polypropylene, or nylon, optionally filled.

Claim 10 (previously presented): A crash box according to claim 1 wherein the internal member is made of metal.

Claim 11 (previously presented): A crash box according to claim 1 wherein the internal member is made of rigid thermoplastic material such as polypropylene, nylon or glass filled nylon.

Claim 12 (currently amended): A crash box according to claim 1 wherein the expandable material is a foamable material that is attached to the extremities extremity of the compression reducing arms by push pins.

Claim 13 (currently amended): A crash box according to claim 12 in which the push pins act as spacers between the extremities of the compression reducing arms and the outer external hollow member.

Claim 14 (currently amended): A crash box according to claim 1 wherein the internal inner member is shorter than the outer hollow member.

Claim 15 (currently amended): A crash box according to claim 14 wherein the internal inner member is shorter by from 1 centimeter to 10 centimeters.

Claim 16 (currently amended): A crash box comprising:
an outer hollow member; and
an internal member slideably mounted within the outer hollow member, said internal member being provided with compression reducing arms extending towards an the internal surface of the outer hollow member, wherein:

- i. the compression reducing arms are provided with expandable material at their extremities of the compression reducing arms adjacent to the internal inner surface of the outer hollow external member;
- ii. the expandable material is a structural adhesive foam;
- iii. the expandable material is selected so that the expandable material it will foam under the conditions into which that a the vehicle frame is subjected to in an the coat oven;
- iv. the outer external hollow member is cylindrical, hexagonal, rectangular or square in cross section; and
- v. the internal inner member is shorter than the outer hollow member by from 1 centimeter to 10 centimeters; and
spacers holding the internal member away from the internal surface of the outer hollow external member to allow anticorrosion fluid to contact substantially an entirety of the entire internal surface of the outer hollow external member wherein the spacers are provided on the internal member.

Claim 17 (currently amended): A crash box according to claim 16 wherein the outer external hollow member is made of metal or a rigid plastic material such as polypropylene, or nylon, optionally filled.

Claim 18 (original): A crash box according to claim 16 wherein the internal member is made of metal or a rigid thermoplastic material such as polypropylene, nylon or glass filled nylon.

Claim 19 (currently amended): A crash box according to claim 16 wherein the expandable material is a foamable material that is attached to the extremities extremity of the compression reducing arms by push pins.

Claim 20 (currently amended): A crash box according to claim 19 in which the push pins act as spacers between the extremities of the compression reducing arms and the outer external hollow member.

Claim 21 (currently amended): A crash box comprising according to claim 16 wherein the expandable material is located between the extremities of the compression reducing arms and the internal inner surface of the outer hollow outer member.